

*Precision*

APR. 1972  
Vol. 16 No. 12  
Fifty Cents

# SHOOTING



*a magazine  
for shooters  
by shooters*



AUSTRALIA



UNITED STATES



CANADA

# PRECISION SHOOTING

PUBLISHED MONTHLY BY PRECISION SHOOTING, INC.

Editorial and business offices at  
8 Cline Street  
Dolgeville, N. Y. 13329  
Tel. 315-429-9227

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Precision Shooting is published monthly by Precision Shooting Inc. Rates: U.S., Canada and Mexico \$5.00 a year; \$9.00 for 2 years; all other countries \$6.00 each year.

Place of Publication—The Journal & Courier Co., Little Falls, New York 13365. Second-class postage paid at Little Falls, New York.

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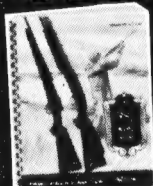
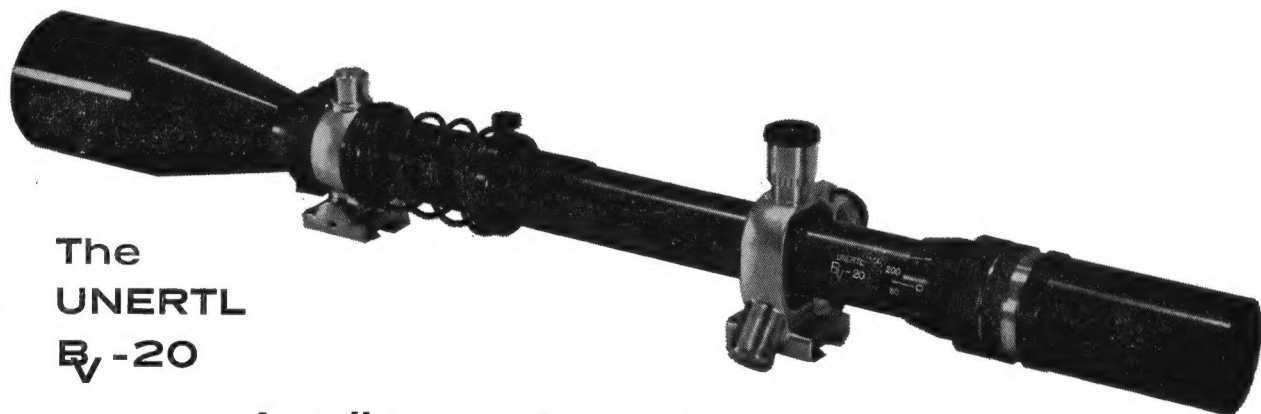
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623 Washington St.  
Meadville, Pa. 16335

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# IBS

## News Releases

1972

### IBS AFFILIATED CLUBS

Pine Tree Rifle Club, Inc., c/o Ralph Skakel, IBS Director, 210 Burton Lane, Johnstown, N. Y. 12095.

South Creek Rod & Gun Club, R.D. #2, Gillett, Pa. 16925, c/o Jack Deming, IBS Director, R.D. #1, Lawrenceville, Pa. 16929.

Lower Providence Rod & Gun Club, c/o George J. Etter, IBS Director, 222 Walnut St., Spring City, Pa. 19475.

Volunteer Rifle & Pistol Club, Inc., c/o J. E. Fowler, IBS Director, 1101 Oaklett Dr., Knoxville, Tenn. 37912.

Council Cup Rifle Range, c/o Wallace E. Hart, IBS Director, 300 West Fourth St., Nescopeck, Pa. 18635.

Hamburg Rifle & Pistol Club, Inc., c/o Emmett A. Francis, IBS Director, Box 12, Hamburg, Pa. 19526.

Izaak Walton League of America, c/o Charles W. Smith, IBS Director, 2341 Breezewood Road, York, Pa. 17404.

Minnetonka Game & Fish Club, c/o Phil G. Carney, IBS Director, 5637 James Ave. South, Minneapolis, Minn. 55419.

Sulphur Springs Rifle & Revolver Club, Muncy, Pa. 17756 c/o Charles Pardoe, IBS Director, R.D. #2, Muncy, Pa. 17756.

Central Pennsylvania Rifle Club, Inc., c/o C. D. McElwee, IBS Director, R.D. #1, Dauphin, Pa. 17018.

Capital City Rifle and Pistol Club, c/o Maurice Hyde, Jr., IBS Director, R.F.D. #4, Augusta, Me. 04330.

Camillus Sportsmen's Club, c/o John Sagert, 910 N. Townsend St., Syracuse, N. Y. 13208.

Guthsville Rod & Gun Club, c/o George W. Elison, Recording Secy., P.O. Box 352, Allentown, Pa. 18105.

South Florida Benchrest Shooters, c/o Edward Sempey, Secretary, 344 N.E. 167th St., Miami, Fla. 33162.

Liverpool Rod and Gun Club, c/o Richard J. Deneve, IBS Director, 803 Liverpool Rd., Liverpool, N. Y. 13088.

York Benchrest Shooters Club, c/o George Wachmann, IBS Director, 1109 Morrison Heights Rd., Oakville, Ontario, Canada.

McKinley Benchrest Shooters Club, c/o Albert Creighton, IBS Director, 6087 Willowdale Ave., Waynesburg, Ohio 44688.

Watervliet Fish and Game Protective Assn., c/o Robert D. Antonucci, IBS Director, 49 Marshall Ave., Schenectady, N. Y. 12304.

Reading Rifle & Pistol Club, Inc., c/o Malcolm E. Barron, IBS Director, 11 Dartmouth, Beverly, Mass. 01915.

Black Ash Sportsman, Inc., c/o Ed Beedle, IBS Director, R.D. #2, Carline Drive, Meadville, Pa. 16335.

\* \* \*

Altoona Rifle & Pistol Club, c/o John Kaylor, 709-4th St., Juniata, Altoona, Pa. 16601.

Millport Saturday Nite Shooters, c/o Harold Oslon, Shinglehouse, Pa. 16748.

Delmarva Sportsman's Association, Inc., c/o S. Joseph Lesley, Exec. Sec., R.D. 2, Smyrna, Delaware 19977.

Richmond Boro Gun Club, Inc., Staten Island, N. Y.—Edward Knobloch, 1544 Victory Blvd., Staten Island, N. Y., IBS Director; Joseph Vecchiarelli, 120 Ainsworth Avenue, Staten Island, N. Y. 10308, ClubSec'y.

Belton Gun Club, Inc., P.O. Box 605, Belton, South Carolina 29627. Contact J. K. Phillips, Secretary.

Gallatin Gun Club, Gallatin, Tenn. 37066.

Town of Dryden Fish & Game Club, c/o Leon F. Macomber, Box 227, Dryden, N. Y. 13053.

Hartford Gun Club, Inc., So. Main St. - Route 187, East Granby, Conn. 06026; Dave Brennan, IBS Director.

The Greenville Gun Club, P.O. Box 123, Greenville, S. C. 29602, c/o Truman E. Watson, IBS Director, 2404 Wade Hampton Blvd., Greenville, S. C. 29607.



INTERNATIONAL  
BENCHREST SHOOTERS

### IBS Officers

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Carl U. Lynn  
R.D. No. 2, Box 20  
Williamsport, Pa. 17701  
Phone 717 323-2507

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Phone 717 752-3481

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#### RECORDING SECRETARY

Emory L. Tooly  
8 Cline Street  
Dolgeville, N. Y. 13329  
Phone 315 429-9227

Correction: **308 Loads for Long Range**, page 10, Feb. 1972 Precision Shooting—Substitute **4895** for the **4350** used in the text. 4895 is the correct powder.

—The Editor

### IBS MEMO

#### IBS Targets — Charter and Life Members

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The annual membership fee is \$8.00 — Life membership in IBS has been set at \$125. Apply to the recording secretary for enrollment. IBS Affiliated Club Memberships \$10.00.

New rule books now available, with minor changes — plus IBS By-Laws at 50 cents per copy.

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# 1972

## Registered Match Schedule

INTERNATIONAL BENCHREST SHOOTERS

### INTERNATIONAL CHAMPIONSHIP TOURNAMENTS

Fassett, Pa.—South Creek Rod & Gun Club, July 27 thru July 30, 1972—All Varmint International Championship Tournament. Contact Laura Andrews, R.D. #1, Millerton, Pa. 16936.

Wapwallopen, Pa., August 19 & 20, 1972—Heavy Benchrest International Championship Tournament—Council Cup Range. Included will also be a Heavy Varmint Regular Registered Match. Contact Robert W. Hart, 332 Montgomery Street Nescopeck, Pa. 18635.

York, Pa.—Izaak Walton League of America, Sept. 16-17, 1972—Hunter Rifle International Championship Tournament. Contact R. A. Linn, Secretary, 73 Jolo Way, York, Pa. 17403.

### OTHER REGISTERED IBS TOURNAMENTS

Canton, Pa.—McKinley Benchrest Shooters Club, May 13, 1972—H.V. & L.V., 100 yards; May 14, 1972—H.V., 200 yards; Sept. 30, 1972 — H.V. & L.V., 100 yards; Oct. 1, 1972—H.V., 200 yards. Contact Albert Creighton, 6087 Willowdale Ave., Waynesburg, Ohio 44688.

Gallatin, Tenn. — Gallatin Gun Club, Sept. 23 & 24—Tennessee State Championship, All Classes; Apr. 22, 1972—Sporter, 5 shot BR; Apr. 23, 1972—Light Varmint & Heavy Varmint; June 17, 1972—Sporter, 5 shot BR; June 18, 1972—Light Varmint & Heavy Varmint; Aug. 5, 1972—Sporter, 5 shot BR; Aug. 6, 1972—Light Varmint & Heavy Varmint. Contact Lloyd Allison, Route #3, Gallatin, Tenn.

Knoxville, Tenn.—Volunteer Rifle & Pistol Club, Apr. 9, May 21, June 25, Sept. 17, Oct. 15, 1972—Heavy Varmint & Light Varmint classes. Contact J. H. Hawkins, 2809 Avondale Ave., Knoxville, Tenn. 37917.

### OTHER REGISTERED HUNTER MATCHES

Muncy, Pa.—Sulphur Springs Rifle & Revolver Club, June 4, July 9, Aug. 6, Sept. 10, 1972 — IBS Registered Hunter Matches. Contact Charles Pardoe, R.D. #2, Muncy, Pa.

Wapwallopen, Pa. — Council Cup Range, May 27 & 28, 1972—Heavy Benchrest & Heavy Varmint; July 15 & 16, 1972—Penn. State Championship, H.V. & L.V. classes. Contact R. W. Hart, 332 Montgomery Street, Nescopeck, Pa. 18635.

Fassett, Pa.—South Creek Rod & Gun Club, July 1 & 2, 1972—H.V. and your choice of H.B., Exp. or Sporter (5 shot matches). 100 yds. Saturday and 200 yds. Sunday. Contact Mrs. Laura Andrews, Secretary, R.D. #1, Millerton, Pa. 16936.

Johnstown, N. Y.—Pine Tree Rifle Club, June 17 & 18, 1972—H.B. & H.V.; Sept. 9 & 10, 1972—New York State Championship, H.V. & L.V. Contact Ralph Skakel, 210 Burton St., Johnstown, N. Y. 12095.

York, Pa.—Izaak Walton League of America, April 16, May 21, June 18, July 16, Oct. 15, 1972. Contact R. A. Linn, Secretary, 73 Jolo Way, York, Pa. 17403.

Hamburg, Pa. — Hamburg Rifle & Pistol Club, April 23, June 11, 1972. Contact Emmett Francis, Box 12, Hamburg, Pa. 19526.

Wapwallopen, Pa. — Council Cup Range, May 7, 1972. Contact R. W. Hart, 332 Montgomery St., Nescopeck, Pa. 18635.

Dauphin, Pa. — Central Pennsylvania Rifle Club, May 28, June 25, July 23, Sept. 24, Oct. 8, 1972. Contact C. D. McElwee, R.D. 1, Dauphin, Pa. 17018.

Sulphur Springs, Pa. — Sulphur Springs Rifle & Revolver Club, June 4, July 9, Aug. 6, Sept. 10, 1972. Contact John E. Pfleegor, 304 So. Market, Muncy, Pa. 17756.

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PRECISION SHOOTING APRIL '72

# SHOOT REPORTS

## SOUTH CREEK WINTER LEAGUE

### MATCH #1

January 16, 1972

As if to say "hello," the South Creek range greeted the first match of the season with a 5 degree temperature with plenty of wind. There were only two aggregates under 1/2 inch. Shooting was trying to keep 5 shots on paper.

W. Hart's .4356 proved the wind doesn't bother him or his .308 too much. Total of 45 shooters present.

|                |        |
|----------------|--------|
| 1. W. Hart     | .4356  |
| 2. D. McIlwain | .4910  |
| 3. J. Arnold   | .5162  |
| 4. C. Detsch   | .5180  |
| 5. J. Gutches  | .5422  |
| Last place     | 1.6274 |

### Small Group

H. Zeiser — .150

Grand Agg. average — .7960

### MATCH #2

January 30, 1972

For the second match of the season W. Hart's .308 winning ways continued. With a total of 51 shooters present and with decent conditions, outside competition was close, with many new faces present.

|               |       |
|---------------|-------|
| 1. W. Hart    | .4836 |
| 2. C. Andrews | .5032 |
| 3. Olewine    | .5078 |

## NON-REGISTERED MATCHES

The Ridge Sportsmen's Club, Inc. (range located off Hill Road 2 miles southwest of Hilton) will hold its first Heavy Gun Shoot — Non-Registered, on June 4, 1972 with starting time 10:00 a.m. We will fire 6 5-shot matches at 100 yards and 6 5-shot matches at 200 yards.

Cash prizes will be paid according to attendance plus my new plan as presented at Winter Meeting will pay the winner of the Grand \$35.00, and a Lucky Shooter Prize of \$15.00 (winner determined by drawing, competitor number). Lunch will be served.

We can fire this course with our target setup by starting at 10:00—time out for lunch. With luck, thru about 4:00 or sooner. If one wishes he may shoot his H.V. rifle against the Heavy.

Motels nearby — range open Sunday 8:30 a.m. For further info, etc., contact: T. H. Boughton, Gunsmith, 410 Stone Road, Rochester, N. Y. 14616, Area Code 716-663-7637.

PRECISION SHOOTING APRIL '72

|                  |        |
|------------------|--------|
| 4. A. Blensinger | .5106  |
| 5. Hauser        | .5238  |
| Last place       | 1.9016 |

### Small Group

Olewine — .255

Grand Agg. average — .6968

### MATCH #3

February 13, 1972

Looks like somebody better draw straws as to who is going to put a cork in W. Hart's barrel. While he was limping on one leg, this didn't deter his fine shooting effort.

|                  |       |
|------------------|-------|
| 1. J. Matyas     | .4288 |
| 2. W. Hart       | .4592 |
| 3. P. J. Hart    | .4604 |
| 4. Reiland       | .4706 |
| 5. A. Blensinger | .4714 |

|            |        |
|------------|--------|
| 6. Wrieden | .4728  |
| Last place | 1.0066 |

### Small Group

J. Matyas — .195

### MATCH #4

February 27, 1972

Don McIlwain, doing a consistent job of doping wind conditions, was the overall winner of the fourth match at the South Creek range.

|                  |        |
|------------------|--------|
| 1. D. McIlwain   | .3884  |
| 2. W. Healey     | .3900  |
| 3. A. Blensinger | .3932  |
| 4. Gamble        | .4044  |
| 5. Clark         | .4058  |
| Last place       | 1.0870 |

### Small Group

C. Andrews — .142 (warm-up)

### SHOOTER'S EQUIPMENT (First 3 positions of first 4 matches)

|               | Caliber | Action | Barrel | Load | Powder | Bullet     | Primer | Scope        |
|---------------|---------|--------|--------|------|--------|------------|--------|--------------|
| W. Hart       | 308     | Hart   | Hart   | 42.0 | 4895   | Detsch     | 9 1/2  | Lyman 30     |
| D. McIlwain   | 222     | SL 700 | Hart   | 26.0 | 748    | Detsch     | 7 1/2  | Redfield 24  |
| J. Arnold     | 222     | Shilen | Hart   | 26.0 | 748    | Own 52 1/2 | 7 1/2  | Lyman 20     |
| C. Andrews    | 222M    | 40X    | Hart   | 28.0 | 4895   | Own        | 7 1/2  | Lyman 20     |
| Olewine       | 243x47  | Hart   | Hart   | 33.0 | 4064   | Detsch 70  | 9 1/2  | Unertl 20    |
| J. Matyas     | 6x47    | SL 700 | Hart   | 23.5 | 4198   | Detsch 70  | 7 1/2  | Remington 20 |
| P. Hart       | 222     | SL 700 | Hart   | 26.0 | 748    | B&A 51     | 7 1/2  | Redfield 20  |
| W. Healy      | 222     | SL 700 | Hart   | 26.0 | 748    | Sierra 52  | 7 1/2  | Redfield 24  |
| A. Blensinger | 222 1/2 | 40X    | Hart   | 22.5 | 4198   | Detsch BT  | 7 1/2  | Lyman 25     |

Jack Matyas, Reporter



## ...with Hornady bullets

Hornady Match bullets were used to establish a new national record last August at Camp Perry, Ohio. Event: The Navy Cup (standing/ off-hand/ slow fire/ iron sights/ 200 yards). Bullet: Hornady Match 30 cal., 168 gr. boat-tail. Score: An amazing 200-15X. The actual target is shown here. The X

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# The President's Message

## Shooting Friends:

A quorum of the Executive Board of Directors braved extreme weather conditions to meet at Horseheads, N. Y., Feb. 25, 1972. The president is grateful for this kind of dedication to shooting but considers the unanimity and efficiency with which problems were dispatched to be a tribute to the membership in that they elected an executive team with the ability to work and agree. Much was accomplished, some of which can be reported here.

As mandated by the membership, the logical succession of officers was established with the recommendations being forwarded to the Nominating Committee. The Powder Puff Matches and Annie Oakley Award were discussed and suggestions made for their implementation. It was resolved to call all shooting records International Records.

The 200 and 300 yard International Benchrest Championship Tournament to be held at Stittsville, Ontario, Canada was discussed. More groundwork is to be done in this

area. Watch P.S. for details of this. Many more decisions of a routine business nature were decided upon but space in this column does not permit reporting them.

Five more committees have been appointed. The president expresses his appreciation for the cooperation and willingness shown by those who have accepted the following positions:

### Nominating Committee:

Clyde Hart, J. Robert Jones and John Stekl

### Measuring Committee, for a two-year term:

Clyde Hart, James Stekle and Paul Kempfer

### Service Team Committee:

Robert W. Hart, Chairman. Mr. Hart will choose his own committee.

### Referee Instruction Committee:

Robert W. Hart, Chairman.

### Range Officer Committee:

Wallace Hart, Chairman. Mr. Hart will choose his own committee.

It is not too soon to consider items for the agenda for the 1973 Winter Meeting. Time and place to be announced later. Make all requests for items to be placed on the agenda to me in writing and I will acknowledge in like manner. State your requests clearly and briefly so that it is not necessary that it be altered or abridged. Please note that all items for the agenda must be printed in three issues of Precision Shooting immediately prior to the Winter Meeting. For this reason nothing can be accepted after Sept. 1, 1972.

The first registered match for 1972 starts in April. So for the coming shooting season dope a little, gunsmith a little, pray a lot, tighten your guard screws, and vent all your coming wrath on the nut on the butt plate.

Good Shooting,

Carl Lynn

## SNO BALL MATCH II

January 30, 1972

A clear, moderate day with 2 inches of fresh snow, 36 HV shooters, 26 Hunter rifles and lots of optimism set the scene for the second match of the Sno Ballers for 1972.

New numbers on the target frames to go with the new benches now makes this a first class range for the winter matches. The now seasoned, efficient target gang had everything in readiness for a 12:00 noon start and fast work by everyone hurried the shooting for a finish before 4:00 P.M.

## Match results:

### HEAVY VARMINT

#### Group

|                    |       |
|--------------------|-------|
| 1. Myles Hollister | .380  |
| 2. G. Stannard     | .393  |
| 3. R. Czarkowski   | .3929 |
| 4. John Hollister  | .3979 |
| 5. Ken Viara       | .4041 |
| 6. Bob Wade        | .4121 |
| 7. Bob White       | .4171 |
| 8. J. Marinko      | .4399 |
| 9. Joe Vinci       | .4534 |
| 10. R. Hornbeck    | .4545 |
| 11. F. Vahle, Sr.  | .4678 |
| Last place         | 1.284 |

#### Small Group of the Day

Barry Davis — .165" (with .30 cal.)

#### Score

|                   |     |
|-------------------|-----|
| 1. F. Vahle, Sr.  | 398 |
| 2. G. Stannard    | 393 |
| 3. Bob Wade       | 388 |
| 4. J. Hollister   | 387 |
| 5. Lee Martin     | 386 |
| 6. R. Czarkowski  | 383 |
| 7. K. Perzanowski | 383 |
| 8. P. Leonard     | 382 |
| 9. R. Hornbeck    | 381 |
| 10. B. Davis      | 381 |
| 11. M. Hollister  | 380 |
| Last place        | 319 |

### HUNTER RIFLES

#### (In Order of Score)

|                    |        |
|--------------------|--------|
| 1. Bill Huntington | 243    |
| 2. M. Hollister    | 241    |
| 3. F. Vahle, Sr.   | 240    |
| 4. J. Kohler       | 236 3x |
| 5. Bob Reid        | 236 2x |
| 6. Ed Martin       | 235    |
| 7. N. St. Pierre   | 232 5x |
| 8. S. Masker       | 232 3x |
| 9. I. Farnsworth   | 232 2x |
| 10. J. Hollister   | 230    |
| 11. C. Vaughn      | 229    |

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Sponsorship is the same procedure as last year. All new member applications **must** be signed by the sponsor. **Every** IBS member or club is eligible to enter the contest.

There will be **one** drawing for the Grand Cash Prize. There **will be** other 'Fish Bowl' drawings for additional donated prizes.

Official starting date: April 1, 1972. Ending date: Annual Meeting date in January 1973. Send all new member applications to IBS Headquarters, Box 148, Dolgeville, N. Y. 13329.

# Technical COLUMN

**M. H. WALKER**  
Technical Editor  
R.D. 1, Warren Road  
Mohawk, N. Y. 13407

## LOADING FOR ACCURACY

My real ignorance lies in the area of "loading".

Is there available anything that would/will help me to learn to load for accuracy?—Heaven knows there is plenty of data on how to just load.

Just curious, but how/why did the 52-53 gr. hollow point become the darling of bench shooters? Oh, that's what I'll use, but I'll still wonder why.

Back to 'working up a load' I can't help but wonder how much of a factor ambient air temperature is. For example, right now we are shooting in 30 degree weather at best. Come summer it'll be 80 to 90 or worse. Can you say if this sixty degree range has an appreciable effect on loads? No doubt my concern is that I not work up a load now that is pretty good and then find it not so good as temperatures rise and then wonder why.

R. O. Whitaker  
c/o Sojourns International, Inc.  
161-10 Jamaica Avenue  
Jamaica, N. Y. 11432

\* \* \*

Toohey has asked me to attempt to answer some of your questions on hand loading. First it is recommended that you purchase preferably all of the handloading manuals available and read them essentially from cover to cover, if you have not already done so.

Since there are so many variables in accuracy shooting, it is difficult to tie down recommendations in a really objective way. Most shooters feel that the bullet is the most important single item connected with accuracy shooting. This of course assumes that you have eliminated the rifle variables as much as possible by having on hand one of the proven rifles in a good bench rest caliber. It is only reasonable that bullets should be important. Although it is not as simple as it might sound, we should be able to produce a rifle so

that it acts the same for each shot, and reasonable success has been achieved in doing this. But, with bullets we are using a different one for each shot while the rifle stays the same. So, from the standpoint of pure logic, the bullet assumes importance. We can calculate mathematically the effect on accuracy of bullets which vary in dimensional characteristics. If the center of form differs from the center of gravity longitudinally, the bullet will fly on a tangent to the twist in proportion to this difference. If the base of the bullet is not square and perpendicular to the center of form, one side will leave the barrel, at the muzzle, before the other side and the bullet will again fly on a tangent proportional to the out-of-square-ness. The combination of these affects results in the spread of the holes on the target.

In the manufacture of bullets for accuracy, dimensional uniformity in jacket wall thickness is one of the important items. This is so because of the problem of making the center of gravity and the center of form coincide. Hollow point bullets, such as the 52-53 grain you mention, have the worst section of the jacket placed near the center of gravity at the point. On top of this we leave the lead out of the point so that the center of form-center of gravity difference is even less when a variable jacket wall occurs. Some bullet makers are using a short boat tail in order to move the release point to the side wall of the jacket so that it is easier to form and consequently more uniform.

Now to present the bullet to the rifle in such a way that it will be able to do the same thing each shot. It would seem reasonable that the bullet should be well aligned with the hole in the barrel and that all the other factors should be as uniform as possible. Many shooters check case wall uniformity at the mouth and some outside turn or ream the cases to increase uniformity. This helps in maintaining good bullet alignment. Many of the specific methods have been covered in Precision Shooting previously.

Atmospheric pressures and temperatures, as well as the relative humidity, do affect accuracy. Air density and temperature differentials on the range also affect accuracy. The force applied to the base of the bullet changes with changes in chamber pressure and chamber pressure is affected by atmospheric changes. For this reason a load which works well



**M. H. Walker**

today may not work well tomorrow. The competitor who hits it right and is also able to shoot wins the match!

In general the dense, dry, winter air is not conducive to the best accuracy. Best results are obtained in light, moist, warm summer conditions on windless overcast days. Temperature differentials on the range under these conditions are at a minimum so that variable light refraction causing displacement of the target picture is at a minimum.

A good clean burning case full of powder which gives uniform velocities seems to give the best accuracy results. Although uniformity is always desirable, it is not always necessary. The .222 with most of the loads presently being used may have velocity variations over 50 feet per second. Slower powders generally give better uniformity than fast powders as long as adequate pressures can be reached.

These are rather general answers to your general questions. If you want some specifics, suggest you ask some specific questions. —M.H.W.

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# The Rifleman's Corner

By GARY L. ANDERSON  
R.R. 2  
Axtell, Nebraska 68924



GARY L. ANDERSON

## Olympic Training Reminiscences

Among the youthful dreams that go to make sports champions, there aren't many that seem more important than a dream of victory in the Olympic Games. 1972 is another Olympic year—a time when a select group of young men and women from around the world are going to have their lives changed by a sports victory that initially rewards them with only a gold medallion hung on a ribbon around their neck. But that medal is only a beginning. They will never again really have a chance to live a normal life.

Yet, even more impressive than the change which this victory makes in the lives of the young people who win is the fantastic effort which they and their competitors make in preparing themselves for this quest for excellence. In the days when men like Avery Brundage first began their association with the Olympic movement, Olympic gold medals were won by highly skilled leisure-time sportsmen who could still call their competitive activities a recreation.

No more—today's Olympic gold medal winner has to face such highly trained and conditioned opposition that the only way he really has a chance to win is when he is willing to put the goal of becoming an Olympic champion first in his life. The effort requires tremendous amounts of training time, a scientifically designed training program, excellent training facilities and more than anything else, fanatical dedication. Winning an Olympic gold medal requires so much of a person today that the effort is really incompatible with getting serious about any other job or vocation.

Winning an Olympic gold medal means either giving up an awful lot of other things or organizing one's entire life around sports so that this becomes the real objective of one's whole life. If the alternative is giving up a lot of other things, the question is always asked as to whether it's worth it. My answer has always been an unequivocal yes. Yes, not because the big victory in the Olympics is the gold medal, but because the big victory is the experiences and understanding which the international sports competitor gets through intense competition

with people from all over the world, who are supposed to be different from him, but who, as he finds out by competing with them, aren't different at all.

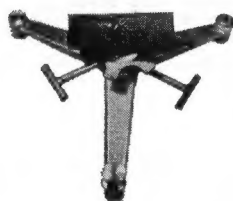
The most important purpose and value of sports competition is not to demonstrate superiority; its real purpose is the personal development of those who participate. And in terms of personal development, I don't think there is any sports experience that does more for a person than the Olympic experience. Why? A good share of the reason for this has to do with the training and preparation the competitor has to go through to get there.

Since I will have announced my final decision not to try out for this year's Olympic Games in Munich by the time this appears in print, I thought this might be a good opportunity for me to think back on my own training for the last two Olympiads. Perhaps I can relate some thoughts that might be helpful to someone else who is nurturing an "Olympic dream."

My personal decision to make my retirement from active international shooting permanent has been made because I've accomplished my goals in sports and because the quest for sports supremacy takes too much away from anything else a person might want to do. Sports gives a lot to the competitor, but it doesn't give him too many opportunities to give back. There comes a time when a person must do this too.

But now, let's consider some of my Olympic training experiences. When I began my training for the 1964 Olympic Games, I had the advantage of having already been to the 1960 Games in Rome as a non-competing alternate. The opportuni-

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ty to actually be at an Olympic Games and to sense some of the Olympic atmosphere made a big difference in the decisions I made when I began training for the next Olympics.

This experience resulted in my making several assumptions that my later Olympic experiences confirmed to be true, for me, at least. My first assumption was that the Olympics are different. They weren't just another shooting match with a little more prestige attached to their titles. The Olympics are a grand competitive festival that immerse the competitor in an atmosphere totally unlike any other competition he will ever enter including the World Championships. The point to this assumption, of course, was that I had to get myself mentally prepared for something that would be a lot different than the big shooting match that I first envisioned.

My second assumption was that there is more pressure in the Olympics than in any other shooting competition, and that this factor also applied to the Olympic tryouts. The tremendous pressure of the Olympics comes about not only because of the special atmosphere of the Olympics and the prestige which an Olympic title holds; but also because for most of the serious competitors there, the Olympics have been the focal point of their sports ambitions since they first began training. The Olympics thus become a do or die moment of truth for the truly world-class competitors there.

Acknowledging that the Olympics do put additional pressure on the competitor is important, I think, because it is impossible to face pressure unless you are prepared for it. What this meant for me was that I had to start much earlier getting mentally prepared for this pressure, which in turn meant living with a stomach tied in knots for quite a few more months. In the end, though, I am sure mental preparation is one of the keys to dealing with pressure.

A third assumption I made was that my major training thrust should not be towards simply increasing my mechanical ability to fire high scores, but towards improving my technical and mental ability to control my results. In oversimplified terms, what this meant was that I was more interested in understanding and eliminating my lowest scores than in improving my average or high scores. The reason for this is that the Olympics are a once and for all effort. There aren't another

Olympics next week or next year if a bad score happens to come along. Unless a shooter's low scores are still better than anyone else in the world, that kind of score can ruin a whole long range training effort.

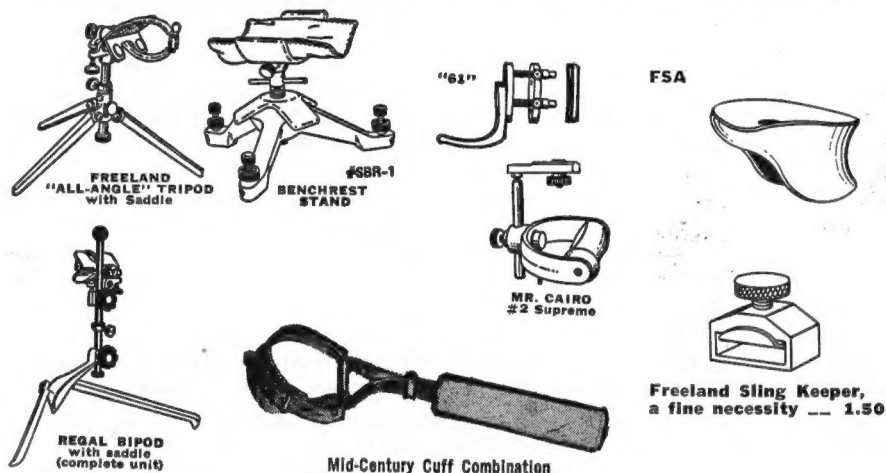
To me, the attempt to deal first with low scores meant a different kind of emphasis than if I were merely trying to raise my average. The emphasis had to be on my analytical capability, my ability to sense as quickly as possible that I was doing something wrong. The distinction that should be made here is

between focusing attention primarily on the positive aspect of performance, what you do to get a good performance, and on the negative aspect of performance, what you did to get a poor performance. Reinforcing the positive aspect of performance yields high scores, but it doesn't necessarily enhance the possibility of correcting a poor performance.

The sequence of training which this distinction points out leads also to a fourth assumption I made in preparation for the Olympics. This

(Next page please)

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is that a shooter must have already reached the level of world-class performance before he begins his final year of preparation for the Olympics so that he can devote that year to enhancing his ability to correct performance shortcomings. Reaching world-class performance capability is a result of the positive aspect of performance. Making sure the shooter does not go below that capability in competition is a result of the negative aspect of performance; that is, preventing, analyzing and correcting errors.

Thus my last 12 months prior to the Olympics were not devoted primarily to raising my level of performance, but to eliminating and understanding my bad performances. This, to me, was the key to making sure that any score I fired would be good enough to win.

Both times, my training specifically for the Olympic Games was started in two phases. One phase, mental training, began two years before the Games, or just as soon as I had completed my training break after the 1962 and 1966 World Championships. During the first year of my mental training for the Olympics, one of my major objectives was to establish my mental standard of performance or, more specifically, the score I wanted to fire in the Olympics. I ended up setting that standard at 1156 for Tokyo and 1160 for Mexico City. Both times I missed by three points.

Once I was able to set my standard, I was able to center my training program around this standard. My range training was designed to give me the ability to keep from going below this standard. My mental training was designed to fix in my mind the kind of performance such a score would take.

Mental training for me usually takes the form of a repetitious mental

rehearsal of the match to be fired. This was true for the Olympics, only much more so. By the time I reached the actual match at the Olympics, I had already fired the match so many times in my mind, I felt like I had already faced and solved almost any circumstance that could have arisen.

I did not begin my shooting and physical training phase of Olympic training until one year before the Games. The timing of this phase was designed to coincide with the end of the National Matches at Camp Perry, which was always included in my training schedule then to provide a relaxing break in my international training regimen. Camp Perry was my shooting vacation.

Once September came, I plunged into my active training schedule. The fall and winter months were periods when I was free to experiment and change when necessary. This was the time when I wanted to make the changes in my positions, techniques and equipment that I felt were needed to correct weaknesses. My cut-off date for the end of experimentation and changes was the beginning of the outdoor season in April. After that I didn't want to change anything unless it was absolutely necessary. Changes and new techniques simply take too long to master.

My actual shooting training was pretty well dictated by the facilities I had available. In 1964, my range was a fifty foot indoor range in a National Guard Armory, so my training then consisted of indoor firing on the A-36 target and a large amount of dry firing.

In 1968, I could get to a range only once a week, but by then the excellent target air rifles had been developed so much of my live firing was done that year with the air rifle. Both years, however, more than half

of my training was done by dry firing. Dry firing was not only more accessible, but it was in reality the best way to concentrate on performance.

In both 1964 and 1968, I was able to train with the Army International Team at Fort Benning during the summer months, so as soon as summer came I was able to start shooting outdoors at 50 and 300 meters. This also meant that most of my training was done by live firing over actual 50 and 300 meter courses as opposed to the predominant dry firing in the fall, winter and spring.

The amount of time I spent training gradually increased throughout the training year. Through the fall, winter and spring, I tried to devote at least two hours a day to training, six days a week. In the summer at Fort Benning, this increased to at least four hours a day.

The number of matches I fired during the training year was generally dictated by circumstances. Since I was going to school both years, I fired matches that were available and close to home. Most of these matches were not the 50 or 300 meter international matches that I would have preferred, but the exposure to match pressure was and is always a useful training tool.

If I were to change anything in the Olympic training which I followed, my match schedule would be the first thing I would want to alter. The year should have started out with a few easy local matches, proceeding at a one match per month pace. The last few matches before the tryouts should be serious dress rehearsals against the best competition available.

One of the questions I had to face in my training was whether to try to prepare myself for smallbore, big bore or both. Most readers are undoubtedly aware that I ended up competing in the 300 meter match both times. Looking at this turn of events with the advantage of the 20/20 vision of hindsight, I have concluded that it was fortunate that I did not qualify to fire both smallbore and big bore at the Olympics. There is so much pressure in the Olympics and the atmosphere is so different from any other competition, that I don't think I could have done a good job of mentally and technically preparing myself for both competitions at the same time. Nevertheless, I still did not make a decision in 1968 to specialize prior to the tryouts. I decided to go with both guns in the tryouts again be-

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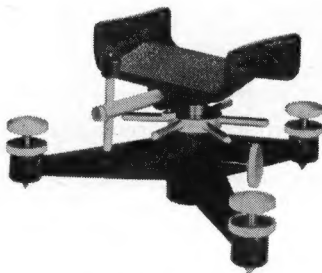
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cause there are too many uncertainties there. Having two chances to make the team was a lot better than one. Once the team is selected, though, I think specialization is a decision that is much more likely to be productive.

Another question I have had to face is how much 300 meter training is necessary. My answer in both cases has been very little. I have always felt that if the shooter is not afraid of the noise or recoil and has a basic understanding of the 300 meter rifle, that he could train just as effectively with the smallbore. Whether or not this is true, it had to be in my case. In 1964, I fired 300 meters only one day before the tryouts. In 1968, I was able to get in four matches but no 300 meter practice before the tryouts.

All this changed at the Olympic Games site, however. There my training was almost exclusively with the 300 meter rifle, although in 1964 a team official forgot to send enough ammo to Tokyo and we had to limit our live firing.

One other phase of training which I always emphasized in my Olympic training was physical conditioning. I tried to be in better physical condition for the Olympics than for any other shooting competition. During the summer of 1968, I was up to five or six miles of running each day. Once again, my main reason for doing this was wanting to be physically prepared to withstand the toll that pressure and nervousness takes on a person.

I am sure that these observations about my Olympic training have demonstrated some obvious differences between my approach to marksmanship training and the approach of other top coaches and shooters. This is part of any sports event. There are no specific routes to the top that can be slavishly followed with any guarantee of success. My purpose then has certainly not been to tell how to do it. Instead, I hope that someone else might gain some insight out of my observations that will help that person design his own training plan that will help him gain the same kind of experiences that I have been lucky enough to have.

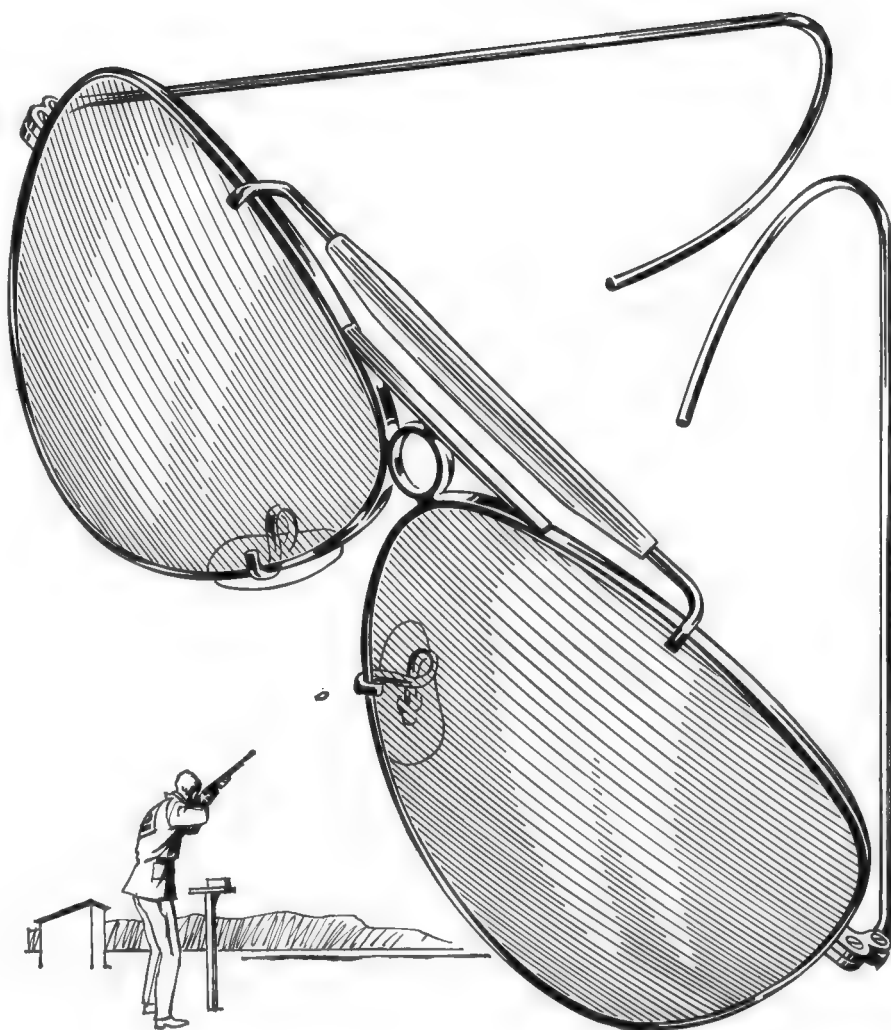
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# Canadian Newsletter

By **GEORGE WACHMANN**  
1109 Morrison Heights Drive  
Oakville, Ontario



Many a shooter will recall the day when his father, grandfather or favorite uncle taught him the use of a rifle. The day when he practiced shooting at rocks, cans, and went to his first turkey shoot. He probably then joined an indoor rimfire range and progressed through his 'V' sighted rifle to peep-sighted rifles and match rifles.

As his marksmanship improved he felt a challenge to shoot outdoors and ultimately proceeded with military long-range shooting or center-fire matches. Throughout this time he progressively purchased better qualities of rifles and felt that his performance was entirely dependent on his ability of aiming, holding and squeezing the trigger.

The day came when he was sighting in his hunting rifle from a bench and decided to fire a three or five shot group on his target. He was shocked to see that not every bullet struck the same point of impact however well he aimed and held his rifle. His curiosity was aroused as to why this was happening and he decided to improve the rifle and reloading components so that smaller groups could be achieved. This was the time when he became a bench rest shooter.

Bench Rest shooting has been carried on in Canada for a very long time but not in a way in which results across Canada could be compared. Competitions have been held between individuals and groups have got together to form clubs. The performance of individual shooters could be gauged in an individual event but methods were not standardized.

Bench Rest Shooters has been formed to introduce standard methods across Canada and make the results of Canadian tournaments compare with results in other countries. During 1971 registered tournaments were held at Stittsville, Ontario, and Strathmore, Alberta. These were run under closely controlled conditions and have enabled us to measure eastern and western Canadian shooters, have enabled us to compare ourselves with the shooters in the States and Australia. It has also enabled us to institute a Canadian Records program and this year we will be joining **International Record** programs.

Any group of bench rest shooters can compete against each other under any rules they may choose but in order that we might participate in the aforementioned programs it is necessary that we all conform to standard rules, regulations, methods and that we give the same opportunity to shooters as would be given in other countries.

Tournaments which qualify for across Canada and International matches will carry **REGISTERED** Tournament status. For your information we define the requirements for a registered tournament.

The facilities you require for bench rest shooting must be standardized so that you will be shooting from similar benches on to targets of standard paper consistency and it will be possible to prove that you have fired the correct number of shots in the specified time limits. Clubs wishing to hold registered tournaments will provide sketches or photographs of their benches together with explanations of construction and the system of target holders, moving backers and stationary backers they have provided at their range. Bench Rest Shooters

(BRS) have copies of drawings which indicate desirable features of a bench rest range.

The material of the target is critical since the group sizes must be very accurately measured. BRS has standard targets. It may surprise some of the shooters that even with the standard paper a wet target will make smaller holes than a bone dry target. For this reason we prefer to have at least one individual identifiable hole in the sighter target when extreme accuracy is needed in measuring group size. The acceptable measuring device is a Sweany Reticle Rule which is a Vernier caliper fitted with a transparent plastic shield engraved with a ring equivalent to the size of the mark made by a bullet passing through a target. This Vernier is equipped with a dial indicator measuring in 1/1000". For measurement you match the mark of the bullet with the engraved circle on one extreme outside of the group and then move the Vernier over until it matches the mark on the extreme other side of the hole. In this way group sizes center-to-center of the bullet marks measured to 1/1000" are used in scoring. BRS Oakville has a Sweany reticle rule and so does the Namaka Bench Rest Club at Strathmore, Alberta.

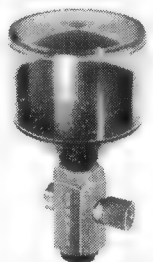
Clubs shooting registered tournaments will purchase their supply of targets from BRS, Oakville.

Information regarding standard rifle classifications, range facilities, range procedures, duties of the officials, etc., etc. are standardized in our Rule Book. Copies of this book are available at BRS, Oakville.

The foregoing enables BRS to ensure that the basic facilities at ranges are comparable, that standardized targets are in use and measurements are taken with standard equipment. It is also mandatory for the club holding registered tournaments that they follow the Rule Book's instructions to the letter. Therefore this ensures that whatever results are recorded in Canadian tournaments these results can be compared with other Canadian registered tournaments, registered tournaments in the States and Australia or other countries which will agree to be bound by our rules.

A further requirement is that clubs holding registered tournaments must publish results concerning these

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tournaments promptly. The requirement is that the registration application made by the shooter, the match registration fee and the results of the tournament must be sent to BRS headquarters within two weeks from the date of the tournament. BRS will add the results of tournaments together with a description of the equipment used by shooters to the Newsletter so that all shooters will be aware of the current results.

BRS will also update the current standings of Canadian records and the standings for inclusion of shooters in the International Postal Match between Canada, the U.S.A. and Australia.

To enable BRS to receive all record targets and their moving backers it is the responsibility of the shooter wishing to apply for Canadian records to hand in his targets to the club conducting the match and it is the responsibility of the club to identify the targets as specified in the Rule Book and return them to BRS headquarters together with the moving backers. These will then be mailed to our Standing Records Committee in Calgary for verification, measurement and safekeeping. Once the targets are officially measured they constitute official Canadian records and this will be advised in the Newsletter. Targets which were on file and are no longer record targets will be returned to the shooters.

The procedure for the International Postal Match for 1972 is that the best targets shot by Canadian shooters in BRS or International Bench Rest Shooters (IBS) registered tournaments will score for inclusion in the Canadian team. Therefore it is the responsibility of the shooter to leave his full set of fired targets in Heavy Varmint, Light Varmint or Sporter classification with the club conducting the match. The club will properly identify the five best targets in each classification, together with the moving backers, and send them to BRS headquarters. The first registered tournament this year is held at Stittsville on April 22nd and 23rd, in Heavy Varmint and Light Varmint classes. We will collect all five top targets in these classifications and include the results as standing in the International Postal Match. Clubs holding future registered tournaments will send to BRS headquarters only those sets of Heavy Varmint, Light Varmint and Sporter targets which beat the announced scores for the International team. In this way, shooters will

know what scores they have to beat to become members of the Canadian team. The last registered tournament qualifying for inclusion in the International team will be held Oct. 7th and 8th at Stittsville. For a complete listing of registered tournaments, see the January 1972 Newsletter. As amendments occur we will keep you informed.

### FIRST 1972 CANADIAN BRS REGISTERED TOURNAMENT

The Northern Lights Bench Rest Club  
Stittsville Shooting Ranges  
Stittsville, Ontario  
April 22 and 23, 1972

Five-shot matches at 100 and 200 yards for Heavy Varmint and Light Varmint classes. 100 yards on Saturday and 200 yards on Sunday.

Registration will be at the Club House located at the Range starting at 8:00 a.m. Saturday. First relay starts at 9:00 a.m.

Registration — \$5.00 per shooter.  
Range fee — \$7.50 per class.

Trophies will be awarded to 1st, 2nd and 3rd Heavy Varmint class; 1st, 2nd and 3rd Light Varmint class; 1st 100 yards; 1st 200 yards.

Any SFC or IBS member may compete. SFC membership can be purchased at the Range for \$5.00.

The range is equipped with fifteen benches and is about 20 miles southwest of Ottawa. Signs will be erected for this tournament.

Meals will be served at the Club House.

A trailer park is at the range, fee \$2.00 per day. No electricity is available. Water can be obtained at the Club House.

Contact: Clint Benedict, R.R. #1, Stittsville, Ontario, Phone: 613-836-3871.

### 1972 REGISTERED TOURNAMENTS

Stittsville, Ontario, Canada — The Northern Lights Bench Rest Club, Stittsville Shooting Ranges, April 22-23, 1972 — Heavy Varmint and Light Varmint; June 24-25, 1972 — National Championships, Experimental, Bench Rest, Heavy Varmint, Light Varmint and Sporter; Sept. 23-24, 1972 — International Championships, 200 and 300 yards: Experimental, Bench Rest and Heavy Varmint; Oct. 7-8, 1972 — Light Varmint and Hunter. For further information contact: Clinton Benedict, R.D. #1, Stittsville, Ontario, Canada; Phone 613-836-3871.

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# Product Survey

## CLEANING EQUIPMENT

Parker-Hale thinks enough of the bench rest shooters to send along a complement of rods and brushes for evaluation. When you look at the cleaning equipment used at the matches one has to admit that their confidence is justified.

These rods and brushes were used last summer in order to get a new slant on our cleaning problems. It is pretty obvious that shooters approve of Parke-Hale rods. It is also pretty obvious that bench rest shooters at least do not approve of any of the brushes presently available.

The problem with wire brushes is that they will not last under the hard use given them in cleaning a bench rifle. The bristles break off, usually on one side at the tip. The user then concludes with justification that the brush is unfit for further use since it can and does collapse on the weak side allowing the solid core to come too close to

the bore especially as the tip enters the throat.

Our conclusions from these tests are that: (1) the presently available brushes have too few bristles, (2) the material in the bristles is much too subject to work-hardening. This is the property of a material that allows quick breakage after a few bends beyond the elastic limit, (3) the diameter of most brushes is too large for the bore. If enough bristles are available to give a normal resistance through the bore, then a diameter only .015 to .020" larger than groove diameter is all that is necessary and less bending of the bristles occurs.

Many brushes available today will last only one and sometimes two cleaning sessions. For a bench rest shooter, or for any shooter who knows how much a clean barrel improves accuracy in most rifles, two cleaning sessions or even four or five is ridiculous. A cleaning brush should last through at least one tournament. Army issue brushes for the .22 and the .30 caliber are almost never worn out until they get too small to clean adequately. So we know good brushes can be made. What the cost would be is not known but almost any price within reason for this type would reduce the overall cleaning cost and the frustrations.

\* \* \*

## CLEANING RODS

John Dewey is going into the cleaning rod business. We have been using one of his .17 caliber rods for some time. It is at least as good as any previously tried and better than most.

It is constructed similar to the better plastic covered rods but is reportedly of better materials. Our use so far has not uncovered any faults. It is understood that John will make several sizes but is presently concentrating on the .17 caliber since there are very few of this caliber cleaning rods available particularly in a quality rod such as John's. More on this later.

## Depth of Grooves In Rifle Barrels

By **CLAUDE E. RODERICK**  
509 Fifth Street  
Monett, Missouri 65708

★

Mr. A. C. Gould, editor of Shooting & Fishing, a predecessor of The American Rifleman magazine, who wrote under the pen name of Ralph Greenwood had this to say in his column "GLEANINGS" of Shooting & Fishing volume 13, No. 4, for November 17, 1892, page 9, on the depth of grooves in some of the Walnut Hill, Mass. top shooting rifles of the day, and I quote:

"My friend Mr. F. J. Rabbeth (who shoots under the name of J. Francis) recently accused me of getting him into trouble. He charged, that by my mentioning his rifles and the scores he secured with them, I have brought upon him a deluge of letters, which he finds a great tax upon his time to answer. He promised to forgive me if I would insert in my gleanings a more complete description of his rifles for the benefit of inquiring riflemen.

"Mr. Rabbeth has two rifles, which consist of Winchester barrels fitted into Ballard actions. The one which I alluded to recently the boys term a multi-grooved rifle. This barrel is .38 caliber, is 32 inches long and weighs 5-3/4 pounds for the barrel alone; it has 12 grooves which are one-thousandth (.001") inch in depth, and the grooves being slightly narrower than the lands. The twist is one turn in 18 inches.

"The second barrel has the same caliber and length of barrel but has 6 grooves which are two-thousandths (.002") of an inch in depth, with the same pitch to the rifling.

"I asked Mr. Rabbeth which of the two barrels he considered the better. He replied that they were both fine shooting barrels, but he thought the multi-grooved barrel with the shallow grooves was the better arm. Now both of these special barrels were made by the Winchester Repeating Arms Co."

**Note by Roderick:** All his shooting was done with paper patched lead-alloy bullets and cleaning between shots. He made a number of 10-shot scores of 120 on the Standard American Rest target at 200 yards which had a 12-ring of 1.410-inch diameter. The edge of the bullet hole being used in the scoring.

## TRADING POST

Groups of figures, abbreviations and initials count as words. Hyphenated word counts as two words. Name and address of advertiser is counted. Use full words instead of initials an abbreviations and make your meaning entirely clear.

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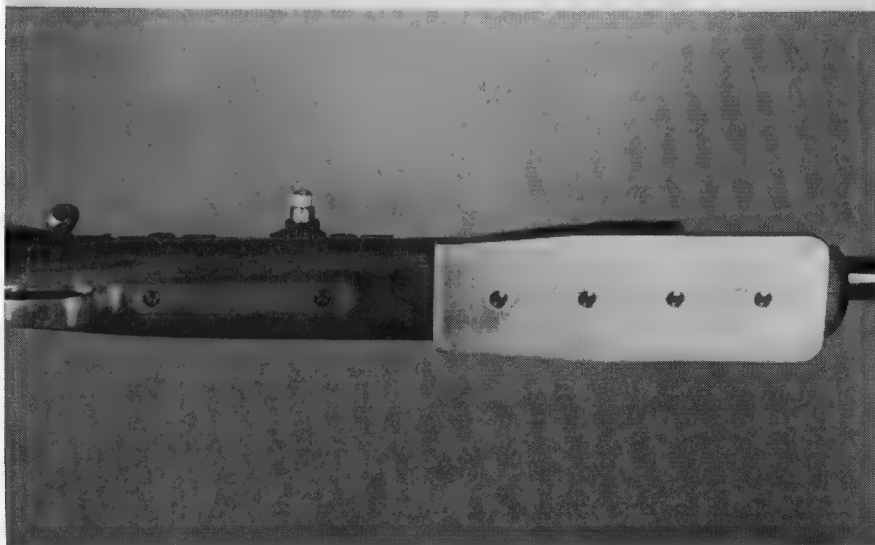
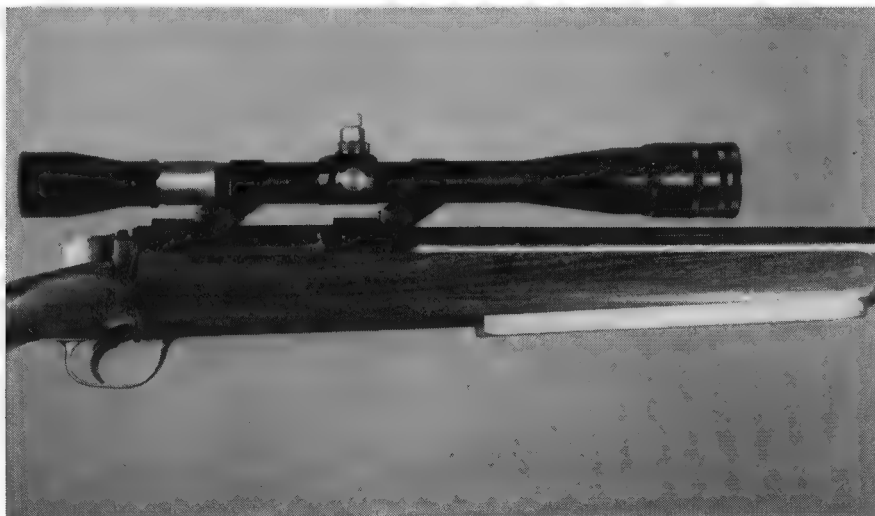
*It's not how short you make it . . .*

## IT'S HOW YOU MAKE IT SHORT

For years benchrest shooters have debated the merits of their optics used in the ever present search for the ultimate in accuracy . . . the one hole group. Magnification, weight, length, windage and elevation adjustments; clarity, brilliance, parallax and mounting have all entered into these monumental discussions to say nothing of the argument as to whether mounting the scope half on the action and half on the barrel does or doesn't detract from the potential of the rifle.

A Shilen action Heavy Varmint rifle in .222 TnT with Lyman A.A. 10X converted by Wally Siebert to 24X resulting in a scope shorter in length, less in weight and greater in eye relief than the Lyman A.A. 20X. Scope is mounted in special packaged Weaver high extension ring top mounts and external adjustments by Paul Kempfer are attached through the scope's original equipment dust caps. Aluminum flat just under 3 full inches in length weighing 3/4 pound was made possible by the reduction in scope and mount weight.

—Photos by Bob Pease



BOB PEASE

so weight as a factor is of prime concern to many.

Length, clarity and brilliance are all important considerations and the latter two can definitely affect our end result. Length naturally adds to weight and bulk and renders the scope more vulnerable to bumping and damage. Windage and elevation adjustments and parallax correction have been pretty well under control in recent years but there isn't a shooter around who wouldn't like to have internal and easily adjusted controls on all scopes and parallax adjustments that are easier to manage. A large portion of the benchrest fraternity concur that whenever possible the scope should not be mounted half on the barrel and half on the action as evidenced by special mounting rails, Hart forward action sleeves and the Hart and Shilen sleeved actions which by their very nature become ideal scope mounting surfaces.

Scope manufacturers have been aware of the shortcomings of their products and in a few cases have tried to make some improvements in recent years though few if any have re-designed a scope around the bench rest requirements because . . . fellow stool shooter . . . our clan is just not large enough that any company is going to make a scope just for us to use. How many would he sell? . . . a thousand or two at the most? Well, in our mechanized and computerized world today it would be very doubtful if they could program the computer to shut off the machine quick enough to get stopped at such a small production total.

(Next page please)

By BOB PEASE  
623 Washington St.  
Meadville, Penna 16335

Unertl and Remington have made efforts in our behalf, the former having introduced the BV-20 a couple of years ago and Remington their first-ever scope sight about the same time. Both lacked one thing from the very start in that their maximum available magnification is 20X which makes an ideal 100 yard optic but leaves anyone other than a 20/20 vision shooter a bit on the short side at 200 yards and completely out of the ball game at 300 yds. The Redfield 3200 had predated both the Unertl and the Remington but their only claim to fame has been the solid mounts and the internal adjustments and while their mounts are solid as a rock the length of the scope is still such that either a special bridge base or a sleeve must be used if the scope is to be mounted other than 1/2 on the barrel and 1/2 on the action.

Last spring Lyman came very close to solving nearly all the above mentioned problems with the announcement of their A.A. in 20X. Here at last was a higher power scope short enough to plant entirely on the action, with internal adjustments and easily adjusted parallax adjustments. It was quite readily accepted and began to appear on the Light Varmint and Sporter as fast as their owners could get their hands on one and rifles just about get it bolted down and hurry to the range to try it out. Weight was the prime motivation of course, as one could shade a Super Targetspot or 3200 Redfield by nearly a half pound. Many felt however that the Lyman still wasn't the ultimate answer to anything except the weight and mounting problems as the scope still was made only in 20X, the adjustments are not easily changed and the eye relief has been drastically shortened . . . so much so in fact that a stock crawling .308 shooter is apt to be seen leaving the range with a 20X Lyman firmly implanted in his skull.

With the exception of a few isolated efforts such as Redfield's 6-18X variable which, while introduced as the answer to a bench shooter's prayer, never quite made the grade, this has been about the extent of the known manufacturer's efforts to date. Individual shooters—some with optical experience, some with mechanical experience and some without either—were trying desperately to increase the power of the hunting type solid mount scope for benchrest use. Tom Seitz, the Pendleton, Oregon gunsmith, made up an extension to the ocular cell of

a Lyman A.A. 10X scope but he was quick to admit that it left a great deal to be desired. Richard DeNeve, an avid Big Gun shooter from upper New York, wrote a very graphic article in *Precision Shooting* several years ago describing a conversion which he had accomplished within the scope. This writer had correspondence with him at that time and it later appeared that it would not be economically feasible to do these conversions for other shooters and the project was abandoned.

On the west coast several other shooters tried converting existing hunting scopes with varying degrees of success but none so practical that they went beyond making a few conversions for their shooting buddies and most declined to convert scopes for interested shooters finding it either too difficult to acquire the correct lenses or too time consuming a process to permit a profit.

About a year ago there appeared in one of the shooting magazines, mention of a new conversion procedure by a Wally Siebert of Issaquah, Washington and not yet ready to give up in my quest for the ultimate optic I followed the lead with a serious inquiry regarding the Siebert conversion. By return mail I received a personal reply, no razzmatazz printed brochures or anything earth shaking like that but just plain data that was interesting, intriguing and almost unbelievable. After more than a year of correspondence I have come to know Wally as an avid benchrest shooter both of the Varmint class rifles and the XP-100 pistols in the Puget Sound area as well as a superb stockmaker and woodworker in addition to his optical achievements. Here at last is a means of having a scope converted to come about as close to the ultimate as seems likely at the present time. A Lyman A.A. 8X can be readily converted to 16X or to 20X and when finished it will have **greater** eye relief than the current A.A. 20X. A Lyman 10X A.A. can be converted to either 20 or 24X and again the end result will have **greater** eye relief than the 20X A.A. For those who might want to guild the lily (and I think I will) the Lyman 20X A.A. may be converted to either 25X or 30X and the eye relief will be **increased** by approximately 3/4 inch. Phenomenal, you say??? That is exactly what I said . . . until I saw the actual conversion itself. My comparisons have been side by side with the 'issue' Lyman A.A. 20X and I consider the Siebert conversion to

be superior in all respects pertinent to benchrest shooting. There may be a slight falling off in sharpness and brilliance in the converted scopes but this occurs only at the extreme outside edges of the field of view and then are very slight. You might not be able to watch your nearest competitor's target quite as closely but that might be a distinct advantage rather than a disadvantage. Siebert is quick to tell you that he considers the Lyman scope to lend itself to the conversions better than any others and in fact the only other scope he will convert is the Weaver. While not able to be as sure of the end result with the Weaver as with the Lyman the Weaver does nevertheless have one distinct advantage in that eye relief will be close to 5 inches of the converted 20X which would be most desirable for the heavier calibers and/or the XP-100 benchrest pistols. 20X is considered as maximum for the Siebert/Weaver conversions.

The Siebert/Lyman conversion was the beginning of an interesting chain of events for me this winter. Not being a Light Varmint or Sporter shooter I had nonetheless wanted the advantages of a shorter, lighter, internal adjustment scope capable of being mounted entirely on the action of my Heavy Varmint rifle. Weight was a factor in that this rifle had a beautifully rounded beavertail fore-end that always seemed to roll in the sand bags causing some dispersion in the grouping . . . or so I liked to think, at least. The weight of the rifle was such that adding a flat section underneath the fore-end would be virtually impossible and stay in the weight limit. The 24X Siebert/Lyman conversion reduced my overall weight enough to permit an aluminum flat as shown in the accompanying photograph to be added under the fore-end. The Siebert/Lyman conversion did create one problem for me in that the one inch cell Wally adds to effect the conversion positioned the scope closer to my eye than my stock crawling habits would permit. After considerable correspondence with the W. R. Weaver Co. I was able to persuade them to package their high extension ring top mounts in pairs on special order and the result can be seen in the picture where the scope is positioned well forward without cramming the mounts closer together.

The Weaver mount has to be about the lightest and least expensive mount available for this type of

scope though I am sure that others would be equally as suitable on other actions. The crowning jewel completing my Heavy Varmint conversion is the unique external scope mount adjustments which are the brainchild and product of Paul Kempfer of Wellsburg, New York, a veteran bench shooter and outstanding workman. Paul uses the original Lyman adjustment caps to install his beautiful little creations and by purchasing an extra set of caps one could convert back to the original quite easily if the scope or outfit were to be used for chuck hunting. The adjustments are ingeniously simple in that they contact the Lyman adjustments perfectly and can in no way harm the scope. They are easily installed in seconds. Paul does require that you send your caps to him for the installation.

An interesting summary regarding the Siebert/Lyman conversion is that this finished 24X weighs less and is shorter than the factory 20X A.A. It has a full inch more of eye relief and will equal the 25X Super Targetspot in clarity and brilliance. All in all our shooter friend Mr. Siebert has helped to bring us one step closer to the shooters' Utopia with his fine conversions. The prices and available powers from the Siebert price sheet will be reproduced with this article.

\* \* \*

In order to make hunting type telescopes suitable for serious varmint—and benchrest shooting — conversion of the following scopes **WITH PERMACENTER RETICULES** is available:

|                                |         |
|--------------------------------|---------|
| Lyman 8 X A.A. up to 16X       | \$25.00 |
| Lyman 8 X A.A. to 20X          | 30.00   |
| Lyman 10 X A.A. to up to 20X   | 25.00   |
| Lyman 10 X A.A. to 24X         | 30.00   |
| Lyman 20 X A.A. to 25X and 30X | 25.00   |
| Weaver K8 to 15X               | 25.00   |
| Weaver K10 to 20X              | 25.00   |
| Weaver K12 to 20X              | 25.00   |

To get the most from the conversion, it is highly recommended to use a finer reticule than standard with factory scopes, and the following are available for installation:

|                              |         |
|------------------------------|---------|
| Extra fine crosshairs @      | \$ 5.00 |
| "LEE DOT" reticule with 1/8" |         |
| or 1/4"* dot @               | 10.00   |

\* Area covered at 100 yds.

Prices quoted at plus postage and insurance.

Since the conversion increases overall length of scope by approximately 3/4", it is requested that scopes be shipped in a suitable container to accommodate the scope after conversion.

Orders are processed in same order received and are usually returned within 10 days.

**W. H. Siebert**  
22443 S.E. 56th Place  
Issaquah, Washington 98027

## NEW BULLETS BRING VARMINT PERFORMANCE TO HUNTING CALIBERS

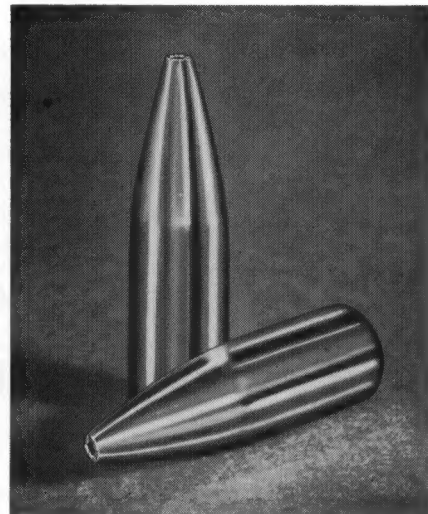
To provide more opportunities for off-season shooting, Hornady Manufacturing Company has introduced new varmint-weight, hollow-point bullets for two of America's most popular hunting calibers — the 270 and 7mm.

The new Hornady bullets — 110 grain 270 and 120 grain 7mm — are designed to match the flat-shooting performance of specialized small-bore varminters, with the added bonus of much greater retained energy at long ranges.

For ballistic efficiency and maximum expansion at impact, both bullets utilize Hornady's proven secant ogive shape and inner-grooved jacket. The 120 grain 7mm, when loaded to produce velocity of 3500 fps and 3265 ft-lbs. of energy at the muzzle, retains 2231 fps velocity and 1327 ft-lbs. energy at 500 yards. The 110 grain 270, when producing 3400 fps velocity and 2824 ft-lbs. of energy at the muzzle, retains 2136 fps

velocity and 1114 ft-lbs. of energy at 500 yards.

The 270 and 7mm HP bullets retail for \$5.40 and \$5.50 per hundred respectively. Additional information, including details on the largest and most complete selection of bullets available to handloaders, is available by writing: Hornady Manufacturing Co., P.O. Box 1848, Grand Island, Nebraska 68801.



## IBS Executive Directors Meeting — February 26, 1972

### Committees Elected and Appointed

1. Jack Deming was elected Chairman of the Awards Committee, and is to pick his own helpers. The Committee will handle patches, ties, trophies, etc.
2. Mike Walker will continue on the International Postal Committee, with Rick Hornbeck as Chairman. Rick has agreed to eventually take over the work.
3. The POWDER PUFF TROPHY will be handled by the President and the Awards Committee. This group will make the arrangements for the time and place.
4. The President appointed Clyde Hart to chair the Nominating Committee, with the assistance of John Stekl and J. Robert Jones.
5. Clyde Hart (Chmn.), Paul Kempfer and James Stekl have agreed to be the Official Measuring Committee.
6. The Executive Committee decided not to use the term WORLD RECORDS, and substituted the term INTERNATIONAL RECORDS.
7. The Liaison Committee will be chaired by Donalee Stekl assisted by husband James Stekl from N.Y., Bunn & Hilda Cork, West Va., Albert Creighton, Ohio, and Cecil Gamble from Pennsylvania.
8. Wally Hart was appointed, by President Carl, as Chairman of the Referee's School.
9. A new Rule Book will be printed with some minor changes. However, the book will contain some new items which are: (1) A HUNTER CLASS tie breaking procedure, and (2) The By-Laws of the INTERNATIONAL BENCHREST SHOOTERS.

## The Case of The Heavy Rifle

As everyone knows the poor old original Heavy Gun has gone downhill as far as its use in the small number of matches held in its classes.

The reason for the small number of matches, of course, is economics—no shooters, no matches. It has gotten to the point almost, to get in the top 20, all you would have to do is be there.

Now this is a dirty shame and I believe unnecessary. I remind all interested shooters that this is the gun that started it all, and the know-how gained on the Heavy was passed on to the other classes that followed—for free.

I also want to point out that the Heavy Gun is the best testing platform ever, whether on sand bags or mechanical rest.

I feel that the work has not been finished, so with our crop of younger shooters I will just bet we can go on to greater understanding of what makes the damn gun shoot here and there. We desperately need more places to shoot the Heavy Gun, but first we must get more shooters.

Feeling as strongly as I do about the Heavy Gun I went to our Annual Winter Meeting held in Binghamton, N. Y. Jan. 8-9, 1972, with a plan to help the Heavy Guns. This plan was presented to the general meeting with, I felt, good acceptance.

In brief, I proposed that a fund would be established; the fund to be called Precision Shooting Prize Fund, and to be maintained by means yet to be determined—(some possibilities: donations, registration fee, raffles, sale of various articles, etc.)

The way this money would be used for promotion as follows (the amount of money to be paid is up to the committee) I only suggested:

The winner of the grand aggregate, \$50.00; a lucky shooter prize of \$20.00 (winner to be determined by drawing competitor number out of a hat).

On the Heavy Gun National: Winner of the grand aggregate, \$100.00; lucky shooter prize of \$40.00 (winner determined as above).

The above arrangement of prizes will give all shooters a shot at the cash.

Naturally the amount of money that can be paid out will depend on how much the Heavy Gun Committee can collect, so the success of this plan will be up to you—the shooters.

The patient is in unsatisfactory condition, and it will take drastic treatment to shock it back to a healthy future.

I think the Heavy Gun is worth the effort. What do you think? It's entirely up to you.

In the above I have talked of the Heavy Gun, but we have two Heavy Gun classes. This is not very clear in our present rule book. Neither is the fact that these two classes do not compete against each other although they are shot at the same match.

In the rule book it lists Page 7, Paragraph E: #1 — Experimental Rifles (this is the mechanical rest).

#2 — Bench Rest (it doesn't say much). This is, or can be, the same Heavy Gun as above, but must be fired from sand bags with no guiding or return to battery means.

When the IBS was formed it was necessary to change the rule book. One of the things we changed was the rule on the Heavy Gun from one class to two. After all the Light Varmint doesn't compete against the Heavy Varmint rifle or Sporter, so we have three classes, OK?

As a veteran of the Rest war back in the fifties I know what went on then, and I don't ever want anything like that to happen again. But I am sure it will if the two classes are again put together. I am as much for the promotion of the Experimental class as I am for the sand bags. But please let's keep it two classes.

At the present time here in the East we have only a few real mechanical rest shooters. I suggest that we work to increase this class with all the vigor that I hope will be put into the sand bags.

In the meantime I suggest that the clubs putting on Heavy Gun shoots use discretion on allotting prizes. I don't think it is fair to the clubs to put out equal prizes, or places, for the Experimental class until their number increases substantially.

# Bedding

This word is the cause of more trouble than any other one thing in the pursuit of accurate rifle shooting. Poor bedding can originate in many ways; not correct in the beginning, an unstable piece of wood that continues to move, rifle placed in damp conditions, rifle placed in extreme heat and dryness, improper procedure in assembling, and other possibilities that all tend to make a poor shooting rifle.

The major problem is — how does the shooter know if his rifle is bedded correctly? This is the purpose of this article. We have been checking bedding for the past six or more years, by the method that follows, and have found it to be almost infallible. I say almost, as very few things are infallible. This test is

for guns with free floating barrels only.

The checking is accomplished as follows. Equipment needed is a bench vise with 3" jaws, or larger, and a Starrett Universal type indicator (as shown in figure #1), or one as equal.

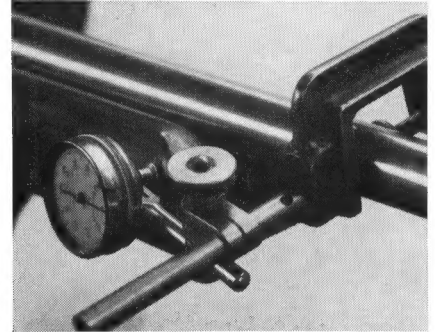
Pad the vise jaws with leather or like material. Place rifle in vise jaws, at the action, with the loading part about centered over the jaw. The elevation for the rifle is determined by placing the widest part of the stock (at action) between vise jaws. Care should be taken in tightening the vise. It must be tight enough that the rifle will not tilt, or fall. Avoid extreme vise pressure; it could damage the wood.

Figure #1 shows the indicator clamp attached to the barrel and the indicator registering button on the top of the stock, clear of and to the right of the barrel. Set indicator dial at "0" reading. For the vertical movement test, it will be necessary to put pressure on the butt of stock, at the same time you apply pressure to the barrel, to prevent the gun from moving in the vise jaws. When horizontal checking is done, this will not be necessary. Do not touch forearm of rifle when taking readings.

You are now ready to take vertical readings. Hook fingers under

barrel, near muzzle, lifting slowly until a reading of .008" shows on indicator. Release slowly. Indicator should return to "0" reading or within tolerance shown below. Now depress barrel to same reading and release.

Figure #2



—Photo by Bob Pease

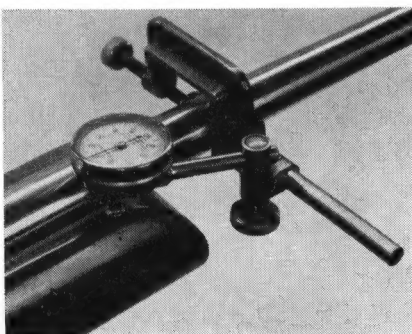
See figure #2 for positioning indicator to check horizontal movement. This is where most errors of bedding are found. The procedure is the same as checking vertical motion, and indicator should return to "0" within the following tolerances: on large benchrest stocks, indicator should return to "0" on both motions; on 13½ lb. class rifles, reading should return to within .0004" maximum error; and on 10½ lb rifles, about .0008" maximum error. This error is due to wood taking a set instead of full return, and increases and decreases, depending on the stability of the stock. Naturally, thin light stocks show bigger error.

This test is to find out if action is moving in stock, and how much. Any movement will cut accuracy.

When a rifle is to be checked, it would be well to do testing in an "as is" condition. After taking readings, and movement is found, tighten guard screws and recheck. If movement is still present, re-bedding is necessary. If no error is found, you may be reasonably certain that bedding is not your problem.

This method does not disturb your rifle in any way, and requires only a few minutes time. One word of caution — when tightening guard screws on a rifle, always tighten the rear screw last, and loosen it first when removing action from stock. A good bedding job can be ruined by tightening the rear screw when the other screws are loose.

Figure #1



—Photo by Bob Pease

# The Remington 40-XB center fire target rifle now has



## a bench rest brother.

The 40XB center fire repeating rifle is ideal for rapid-fire events, especially in the 7.62m/m Nato (308) caliber, because of its shorter bolt throw and extreme accuracy, plus its optimum weight for "over the course" competition. As a single-shot model, the 40XB center fire is offered in several calibers as listed. The action is hand-bedded, and the barrel is free-floating for superior accuracy.

The brother of the 40XB-CF is the 40XB center fire bench rest target rifle. It incorporates all the features of the extremely accurate 40XB-CF, but it is modified to

give the competitive bench rest shooter a standardized rifle that provides the inherent accuracy advantages of a short (20"), heavy, extremely stiff barrel. A wider, squared-off fore-end gives a more stable rest on sandbags or other supports. In combination with the new Remington target 'scope, the resulting package weighs just under 10½ lbs. and meets weight limitations for the sporter and light varmint classes of National Bench Rest Shooters Association competition. For shooters competing in the heavy varmint class, a 13½-lb. 26"-barrel version is available.

| MODEL 40-XB CENTER FIRE                                                                                                                                                                                                                                                                  |                                                                                                                                                                                 |         | SPECIFICATIONS |                                                                                                       | MODEL 40XB-BR CENTER FIRE                 |  |               |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------|--|---------------|----------|
| ACTION                                                                                                                                                                                                                                                                                   | Bolt—Single shot in either standard or heavy barrel versions. Repeater in heavy barrel only.                                                                                    |         |                | Bolt, single shot only.                                                                               |                                           |  |               |          |
| CALIBERS                                                                                                                                                                                                                                                                                 | See listing below.                                                                                                                                                              |         |                | 222 Rem., 222 Rem. Mag., 223 Rem., 6mm International, 6mm x 47, 7.62 NATO (308 Win.)                  |                                           |  |               |          |
| SIGHTS                                                                                                                                                                                                                                                                                   | No sights supplied. Target 'scope blocks installed.                                                                                                                             |         |                | Supplied with target 'scope blocks.                                                                   |                                           |  |               |          |
| SAFETY                                                                                                                                                                                                                                                                                   | Positive thumb-operated.                                                                                                                                                        |         |                | Positive thumb-operated.                                                                              |                                           |  |               |          |
| RECEIVER                                                                                                                                                                                                                                                                                 | Drilled and tapped for 'scope block and receiver sights.                                                                                                                        |         |                | Drilled and tapped for target 'scope blocks.                                                          |                                           |  |               |          |
| BARREL                                                                                                                                                                                                                                                                                   | Drilled and tapped for 'scope block and front target iron sight. Muzzle diameter S2—approx. ¾", H2—approx. 7/8". Length: 27¼". Unblued stainless steel available at extra cost. |         |                | Unblued stainless steel only. 20" barrel for Light Varmint Class. 26" barrel for Heavy Varmint Class. |                                           |  |               |          |
| TRIGGER                                                                                                                                                                                                                                                                                  | Adjustable from 2 to 4 lbs. pull. Special 2 oz. trigger available at extra cost for single-shot models.                                                                         |         |                | Adjustable from 1½ to 3½ lbs. Special 2-oz. trigger available at extra cost.                          |                                           |  |               |          |
| OVER-ALL LENGTH                                                                                                                                                                                                                                                                          | Approx. 47".                                                                                                                                                                    |         |                | 38" with 20" barrel. 44" with 26" barrel.                                                             |                                           |  |               |          |
| STOCK                                                                                                                                                                                                                                                                                    | American Walnut. Adjustable hand stop and front swivel block on rail. Rubber non-slip butt plate.                                                                               |         |                | Selected American Walnut. Length of pull—12".                                                         |                                           |  |               |          |
| AVERAGE WEIGHT                                                                                                                                                                                                                                                                           | S2—9¼ lbs. H2—11¼ lbs.                                                                                                                                                          |         |                | Light Varmint Class (20" barrel) 9¼ lbs. Heavy Varmint Class (26" barrel) 12 lbs.                     |                                           |  |               |          |
| MODEL 40 XB "RANGEMASTER" — CENTER FIRE                                                                                                                                                                                                                                                  |                                                                                                                                                                                 |         | ORDER NUMBERS  | PRICES*                                                                                               | MODEL 40XB-BR CENTER FIRE                 |  | ORDER NUMBERS | PRICES*  |
| CF-S2                                                                                                                                                                                                                                                                                    | Std. Ordnance Barrel                                                                                                                                                            | special | }              | \$249.95                                                                                              | 40XB-BR Heavyweight barrel without sights |  | special       | \$289.95 |
| CF-H2                                                                                                                                                                                                                                                                                    | Heavy Ordnance Barrel                                                                                                                                                           | special |                |                                                                                                       | Extra for two-ounce trigger               |  |               | 40.00    |
| CF-S2                                                                                                                                                                                                                                                                                    | Std. Stainless Barrel                                                                                                                                                           | special | }              | \$269.95                                                                                              |                                           |  |               |          |
| CF-H2                                                                                                                                                                                                                                                                                    | Heavy Stainless Barrel                                                                                                                                                          | special |                |                                                                                                       |                                           |  |               |          |
| Repeating Center Fire Models (Heavy Barrel Only)                                                                                                                                                                                                                                         |                                                                                                                                                                                 |         |                | \$ 20.00                                                                                              |                                           |  |               |          |
| Extra for 2 Oz. Trigger (Single Shot Model Only) (18 Weeks or more for center fire models)                                                                                                                                                                                               |                                                                                                                                                                                 |         |                | \$ 40.00                                                                                              |                                           |  |               |          |
| *SCOPE SPECIFICATIONS                                                                                                                                                                                                                                                                    |                                                                                                                                                                                 |         |                |                                                                                                       |                                           |  |               |          |
| Magnification: 20 X/Objective clear aperture: 36mm/Exit pupil: 1.8mm/Field: 7.5 feet at 100 yards/Eye relief: 2¼"/Overall length: 16¼"/Weight: 19½ ounces including mounts and bases/Adjustment graduation: ¼" graduation with external adjustments. Order Number 5712, price \$169.95.* |                                                                                                                                                                                 |         |                |                                                                                                       |                                           |  |               |          |
| MODEL 40-XB CENTER FIRE CALIBERS                                                                                                                                                                                                                                                         |                                                                                                                                                                                 |         |                |                                                                                                       |                                           |  |               |          |
| (Those marked * can be supplied in repeating models.) Supplied with stainless-steel barrels only: 22-250 Rem.*, 6mm Rem.*, 6mm x 47*, 6mm International*, 243 Win.*, 25-06 Rem., 6.5mm Rem. Mag.*, 7mm Rem. Mag., 30-338, 300 Win. Mag.,                                                 |                                                                                                                                                                                 |         |                |                                                                                                       |                                           |  |               |          |

\*Price shown is suggested minimum price, subject to change without notice.

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